

## **APPENDIX 1**

<b>Glossary of Foreign Exchange Terms</b>	
ABS or Association of Banks in Singapore	ABS publishes a range of daily spot rate fixings for deliverable and non-deliverable currency markets. Those rates stem from 11:00 a.m. submissions by a panel of banks selected by ABS to represent each panel bank's current bid and offer spot rates for Indonesian rupiah, Indian rupee, Singapore dollar, and Thai baht against USD, among others.
A Co-operative	The name of a permanent chat room used by Defendants' traders.
Ammo	Ammo refers to the trades that one Defendant would give to another. <i>See, e.g., "leaving you with the ammo" and "giving you the ammo."</i>
Arbitrage (Arb/Arbing)	The nearly simultaneous purchase and sale of an asset, such as foreign exchange, across two or more markets in order to profit from a discrepancy in their price relationship.
ASIC	ASIC, or Australian Securities and Investments Commission, is Australia's corporate, markets and financial services regulator.
Ask	The rate at which a market maker will sell the base or reference currency. The "ask" is also known as the "offer."
BaFin	BaFin (German: Bundesanstalt für Finanzdienstleistungsaufsicht), or Federal Financial Supervisory Authority, is the financial regulatory authority for Germany.
Back Book	A trader's personalized trading book used to carry out proprietary ("prop") trading for the bank.
Banging the Close	Banging the close occurs when traders break up large customer orders into small trades and concentrate the trades in the moments before and during the Fix calculation window in order to spike the published rates up or down.
[REDACTED]	[REDACTED]
Base Currency or Reference Currency	The first currency quoted in a currency pair.
Betty	FX jargon for the GBP/USD currency pair based on a rhyming scheme ("Betty"), referring to the rhyme of actress Betty Grable's last name with "cable." Cable is also FX jargon for GBP/USD.
Bid	The rate at which a market maker will buy the base or reference currency.
Big Figure	The big figure refers to the first 3 digits of a currency quote. For example, if EUR/USD was trading at 1.2676, the big figure would be 1.26.
BIS – Triennial Central Bank Survey	The BIS Triennial Central Bank Survey, describes itself as "the most comprehensive source of information on the size and structure of global foreign exchange (FX) and OTC derivatives markets."

Broker	An agent who executes orders to buy and sell currencies and related instruments either for a fee or commission. In the foreign exchange market, brokers tend to act as intermediaries between banks bringing buyers and sellers together for a commission paid by the initiator or by both parties.
Brokerage	A firm that acts as a broker by providing currency traders with access to trading.
Building	FX jargon for the act of transacting with third parties outside of the chat room in order to increase the volume of orders held by the traders in the chat room in the desired direction.
Bully	FX trader jargon for 50 million units of currency.
Cable	The nickname for GBP/USD, also called “Sterling”, “Quid”, or “Betty.”
CADE	CADE, or Council for Economic Defence is Brazil’s antitrust agency.
Call Option	An option that gives the holder the right, but not the obligation, to buy the underlying instrument at a specified price during a fixed period.
Cash Settlement	A procedure for settling future contracts where the cash difference between the future and the market price is paid instead of physical delivery.
CEA	Commodity Exchange Act
Central Bank	A central bank provides financial and banking services for a country’s government and commercial banks. It implements the government’s monetary policy, as well, by changing interest rates.
CFTC	The Commodity Futures Trading Commission
Clearing the Decks	Netting off orders with third parties outside the chat room, thereby reducing the volume of orders held by third parties that might otherwise be transacted at the fix in the opposite direction.
Chicago Mercantile Exchange (CME)	A US futures company and one of the largest options and futures exchanges. It owns and operates large derivatives and futures exchanges in Chicago, and New York, as well as online trading platforms.
Combo Boom	FX trader jargon for working together to manipulate FX rates.
Commodity Underlying	The cash commodity underlying a futures contract. Also, the commodity or futures contract on which a commodity option is based, and which must be accepted or delivered if the option is exercised.
Confirmation	A memorandum to the other party describing all the relevant details of the transaction.
Cost of Carry	Determined mathematically from the overall cost involved when lending one currency and borrowing another during the time period stretching from the spot date to the forward date.

Counter Currency	The currency used as the reference or second currency in a currency pair. It is also called the quote currency. In a currency pair, the counter currency provides the price per unit of base currency. For example, if the price of EUR/USD is 1.1672, it costs \$1.1672 to buy 1 euro.
Cross	A pair of currencies that does not include the U.S. dollar.
Currency	The type of money that a country uses. It can be traded for other currencies on the foreign exchange market, so each currency has a value relative to another.
Deal	An FX term that denotes a trade done at the current market price. It is a live trade as opposed to an order.
Dealer	An individual or firm acting as a principal, rather than as an agent, in the purchase and/or sale of currencies. Dealers trade for their own account in contrast to the brokers who trade only on behalf of their clients.
Delivery	The settlement of a transaction by receipt or tender of a financial instrument or currency.
Derivatives	A broad term relating to risk management instruments such as futures, options, swaps, etc. The contract value moves in relation to the underlying instrument or currency.
DOJ	The United States Department of Justice.
Double Team	FX trader jargon for working together to manipulate FX rates.
EC	EC, or European Commission, is the executive body of the European Union ("EU") responsible for proposing legislation, implementing decisions, upholding EU law and managing the day-to-day business of the EU.
ECB Fix	Benchmark rates published by the European Central Bank, including FX rates for 32 currencies actively traded against the euro. The ECB Fix is based upon spot FX trading activity by market participants at or around 2:15 p.m. Central Europe Time (1:15 p.m. London time).
Electronic Communication Network (ECN)	An automated system that matches buy and sell orders for currencies. An ECN connects major brokerages and individual traders so that they can trade directly between themselves without going through a middleman.
[REDACTED]	[REDACTED]
Exercise Price (Strike Price)	The price at which an option can be exercised.
Expiration Date (Option)	The last date after which the option can no longer be exercised.
FCA or UK-FCA	FCA, or Financial Conduct Authority in the United Kingdom, is a regulatory body that regulates financial firms in the UK.
Fed	Federal Reserve Bank
FINMA	FINMA, or the Swiss Financial Market Supervisory Authority, is the Swiss governmental body responsible for financial regulation.

Fix	A benchmark FX rate used to price FX instruments, including the WM/Reuters rates and the ECB Fix.
Fixing Order	A transaction where a customer and bank agree to exchange currency at a benchmark fixing rate.
Foreign Exchange	The purchase or sale of a currency against the sale or purchase of another currency.
Forex (or FX)	An abbreviation of foreign exchange.
Forward Contract (or Forward)	An agreement to convert (“buy” or “sell”) a set amount of a foreign currency on a future date greater than two days at a specified exchange rate.
Front Book	A trader’s market making book, which is used to record client trading and current positions.
Front Running	Trading based upon non-public information regarding an impending trade (usually a customer’s), <i>e.g.</i> , trading in front of or before the customer’s trade.
FSB	FSB, or the Financial Stability Board, is an international body that monitors and makes recommendations about the global financial system.
Futures Contract	Standardized contracts trading on an exchange and calling for delivery of a specified quantity of a specified currency, or a cash settlement, on a specified date.
G10	The Group of 10 refers to 10 of the most heavily traded currencies. They are the USD, EUR, JPY, GBP, CHF, AUD, NZD, CAD, SEK, and NOK.
G20	The Group of 20 is an international forum for the governments and central bank governors from 20 major economies.
“Giving you the ammo”	FX trader jargon for transferring orders to a single trader in the chat room, thereby consolidating these orders in the hands of one trader.
Getting/Get	FX trader jargon for buying currency.
[REDACTED]	[REDACTED]
GMT or Greenwich Mean Time	The most commonly referred to time zone in the FX market. GMT does not observe daylight savings or summer time.
HK-MA	HK-MA, or Hong Kong Monetary Authority, is the government authority in Hong Kong responsible for maintaining monetary and banking stability.
International Monetary Market (IMM)	A division of the CME that deals with the trading of currency and interest rate futures and options. The IMM division of the CME includes such currencies as the U.S. dollar, British pound, the euro, and the Canadian dollar.
IMM Session	8:00 AM EST – 3:00 PM EST.
Interest Differential	Determined mathematically from the overall cost involved when lending one currency and borrowing another during the time period stretching from the spot date to the forward date. Also described as “cost of carry.”
[REDACTED]	[REDACTED]
Kiwi	The nickname for NZD/USD currency pair.

“Leaving you with the ammo”	FX trader jargon to describe traders in a chat room transacting or “netting off” with third parties outside the chat room to maintain the volume of orders in the desired direction held by traders in the chat room and avoid orders being transacted in the opposite direction at the fix.
Left Hand Side (LHS)	When a trader has orders to sell the first currency listed in any currency pair.
Limit Order	An order that seeks to buy at lower levels than the current market or sell at higher levels than the current market. An order with restrictions on the maximum price to be paid or the minimum price to be received. For example, if the current price of USD/YEN is 117.00/05, then a limit order to buy USD would be at a price below the current market, e.g. 116.50.
Liquidity	The degree to which an asset can be bought or sold in the market without affecting the asset’s price.
Liquidity Provider	A market maker that facilitates the trading of an asset or security.
London Close or London Fix	<i>See WM/Reuters Fixing</i>
London Session	3:00 AM EST – 12:00 AM EST
Long Position	A position that appreciates in value if the market price increases. When the base currency in a pair is bought, the position is said to be long. This position is taken with the expectation that the market will rise.
Losing / Lost	FX trader jargon for selling currency.
Lump	FX trader jargon for a non-descript amount of currency between 50 and 500 million.
Mangle	FX trader jargon for attempting to manipulate the Fix.
Mark to Market	The accounting act of recalculating the value of an account to reflect the fair value of positions, rather than book value. This is done by assuming all open positions are liquidated at current market exchange rates.
Market Making	A dealer is said to make a market when he quotes both the bid and offer prices at which he stands ready to buy and sell.
MIO	FX trader jargon for one million.
Mom	FX trader jargon for “at this moment.”
Netting Off	Consolidating the value of two or more transactions, payments, or positions in order to create a single value.
Non-Trade Currencies	Currencies with less market liquidity.
NYDFS	NYDFS, or New York State Department of Financial Services is an agency that regulates a broad array of financial products and services.
NYK	FX trader jargon for the New York branch of a financial institution.
New York Session	8:00 AM EST – 5:00 PM EST
OCC	OCC, or Office of the Comptroller of the Currency is an independent bureau of the U.S. Department of the Treasury, which regulates and supervises all national banks and federal savings associations as well as federal branches and agencies of foreign banks.

Offer	The rate at which a market maker will sell the base or reference currency. The “offer” is also known as the “ask.”
One Team, One Dream	The name of a permanent chat room used by Defendants’ traders
Options on FX Futures	Standardized contracts trading on an exchange and upon exercise, call for the establishment of a FX futures position.
Over The Counter (OTC)	A market conducted directly between dealers and principals rather than through a regulated exchange trading floor. The OTC market is largely unregulated.
Outright Forward	An agreement to exchange sums of currency at an agreed-on exchange rate on a value date more than two bank business days in the future. The exchange rate for a forward transaction is called the forward outright.
Overbuying or Overselling	Traders buying or selling more volume than necessary to fill client orders at the fix.
Painting the Screen	The act of placing phony orders with one another to create the illusion of trading activity in a given direction in order to move rates prior to the fixing window. After the relevant fix is calculated, the trades are reversed.
[REDACTED]	[REDACTED]
Pip	“Pip” stands for “price in interest point.” A pip measures the amount of change in the exchange rate for a currency pair. For currency pairs displayed to four decimal places, one pip is equal to 0.0001. For yen-based currency pairs, a pip is equal to 0.01.
Position	The net total holdings of a given asset.
Pound	Short hand reference for the pound sterling, the official currency of the United Kingdom.
Put Option	A put option confers the right but not the obligation to sell currencies, instruments or futures at the option exercise price within a predetermined time period.
Quote	An indicative market price in the OTC market.
Rate	The price of one currency in terms of another.
Rbase and Rterm	The rate of interest paid on deposits of the base currency.
Real Money	Traders of significant size, including pension funds, asset managers, insurance companies, etc. They are viewed as indicators of major long-term market interest, as opposed to shorter-term, intraday speculators.
RHS or Right Hand Side	When a trader is a buyer of the first currency listed in a currency pair.
SACC	SACC, or South African Competition Commission, is a regulatory body of South Africa responsible for investigating, controlling, and evaluating restrictive business practices.
Settlement	The process by which a trade is entered into the books, recording the counterparts to a transaction. The settlement of currency trades may or may not involve the actual physical exchange of one currency for another.

SFO	SFO, or Serious Fraud Office, is an independent government department in the United Kingdom responsible for investigating and prosecuting serious or complex fraud, bribery and corruption.
SG-MA	SG-MA, or MAS or the Monetary Authority of Singapore, is the central bank of Singapore.
Short Position	When the base currency in the pair is sold, the position is said to be short.
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
Snapchat	A mobile-phone application that sends messages that disappear after reading.
Spot Transaction	An agreement to exchange sums of currency at an agreed-on exchange rate on a value date that is within two bank business days' time. For the CAD\USD currency pair, the value date is normally within one bank business day.
Spot Rate	The exchange rate for a currency pair prevailing in the market at any given moment.
Spread	The difference between the bid and ask price of a currency.
Stand Down	FX trader jargon for agreeing to hold off buying or selling to benefit a co-conspirators position.
Sterling	Short hand reference for the pound sterling, the official currency of the United Kingdom.
Stop-Loss Order	An instruction from the client to the bank to trade a currency if the currency trades at a specified rate. In the case of stop-losses, a stop-loss order to sell is triggered if the bid price reaches the order rate, and a stop order to buy is executed if the offer price reaches the order rate.
Stops	FX trader jargon for a congregation of stop-loss orders.
Strike Price or Exercise Price	The price at which an option holder can buy or sell the underlying instrument.
Swap	The simultaneous purchase and sale of the same amount of a given currency for two different dates, against the sale and purchase of another.
Swiss WEKO	WEKO ("Wettbewerbskommission"), or Switzerland's Competition Commission, responsible for enforcing Switzerland's Cartel Act.
[REDACTED]	[REDACTED]
Taking Out the Filth	<i>See</i> Clearing the Decks.
Term Currency	The second currency listed in the currency pair. <i>See</i> Counter Currency.
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]

The Bandits' Club	The name of a permanent chat room used by Defendants' traders.
The Cartel	The name of a permanent chat room used by Defendants' traders. Members include traders from Barclays, Citigroup, JPMorgan, and UBS.
The Mafia	The name of a permanent chat room used by Defendants' traders. Members include traders from JPMorgan, Barclays, UBS, and Citigroup.
The Players	The name of a permanent chat room used by Defendants' traders
The Sterling Lads	The name of a permanent chat room used by Defendants' traders. Members include traders from HSBC, RBS, UBS, Barclays, and [REDACTED]
[REDACTED]	[REDACTED]
Treasury Markets Association (TMA)	Publishes spot fixes for the USD/HKD and USD/CNY currency pairs in Hong Kong.
Tokyo Fix	Most major banks in Tokyo publish their own fixes at 9:55 a.m. Japan standard time for a range of JPY currency pairings. The Bank of Tokyo Mitsubishi rates are used for approximately 90% of fixing order flow across the Tokyo market.
Tokyo Session	7:00 PM EST - 4:00 AM EST
Ton	FX trader jargon for 100 million units of currency.
Trade Currencies	The following 21 currencies (AUD, CAD, CHF, CZK, DKK, EUR, GBP, HKD, HUF, ILS, JPY, MXN, NOK, NZD, PLN, RON, RUB, SEK, SGD, TRY and ZAR) are referred to as "Trade Currencies" in WM/Reuters Guide.
Turnover	The total money value or volume of all executed transactions in a given time period.
UTC	Coordinated Universal Time is a primary time standard by which the world regulates clocks and time. It is within 1 second of mean solar time at 0° longitude and does not observe daylight savings time. For most purposes, UTC is considered interchangeable with GMT.
Value Date	Also known as the maturity date, it is the date on which counterparts to a financial transaction agree to settle their respective obligations, <i>i.e.</i> , exchanging payments. For spot currency transactions, the value date is normally two business days forward.
Volatility	Volatility (in Forex trading) refers to the amount of uncertainty or risk involved with the size of changes in a currency exchange rate. High volatility means that the price of the currency can change dramatically over a short time period in either direction. On the other hand, a lower volatility would mean that an exchange rate does not fluctuate dramatically, but changes in value at a steady pace over a period of time.
VWAP	VWAP, or Volume-weighted average price, is the ratio of the value traded to total volume traded over a particular time horizon.

WM/Reuters Fix	WM/Reuters publishes fixing rates for spot rates and forwards. WM/Reuters publishes spot rate fixings for 159 currencies. WM/Reuters calculates fixing rates for Trade Currencies every half hour from 6:00 a.m. in Hong Kong/Singapore to 10:00 p.m. in the U.K. The most widely used WM/Reuters rates are the WM/Reuters Closing Spot Rates for Trade Currencies, which are calculated around 4:00 p.m. London time (11:00 a.m. New York time). For Trade Currencies, the 4:00 p.m. fix is based on actual trades, using bids and offers extracted from a certain electronic trading system during a one-minute window (“fix period”).
[REDACTED]	[REDACTED]